

Material Safety Data Sheet

Product: **FERROLOX®**



WATCH® GmbH
A Water Company

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name:

FERROLOX®

Company

WATCH GMBH

Fahrlach Str.14

68165 Mannheim, Germany

Emergency Response Information (8-17 CET)

Watch GmbH: 0049 621 879 510

* 2. COMPOSITION / INFORMATION ON INGREDIENTS

• Composition

Material	Formula	CAS No.	Concentration (weight)
Ferric hydroxide	FeHO ₂	20344-49-4	70 - 85 %

Amounts specified are typical and do not represent a specification. Remaining components are proprietary, non hazardous and/or present at amounts below reportable limits.

* 3. HAZARD IDENTIFICATIONS

Component	CAS No.	% wt	OSHA PEL TWA 8/40h [mg/m ³]	OSHA PEL CEILING [mg/m ²]	ACGIH TLV [mg/m ²]	Listed Carcinogenic (Yes/No)		
						NTP	IARC	OSHA
Ferric oxide*	1309-37-1	70-85%	10	5	5	NO	NO	NO

* Ferric oxyhydroxide is not specifically listed by the OSHA as a pollutant; however, ferric oxide is the most related chemical compound classified by OSHA/NIOSH/ACGIH

Emergency overview:

Contact Product possess little hazard if spilled. May cause irritation through mechanical abrasion. May cause lung damage.

Potential health effects:

Primary route of entry: inhalation, skin contact, eye contact, ingestion
Aggravation of pre-existing conditions: respiratory disorder

Inhalation: Not expected to be irritating. Long-term exposure may cause permanent lung damage. Long term inhalation exposure to iron has resulted in mottling of the lungs, a condition referred to siderosis. This is considered a benign pneumoconiosis and does not ordinarily cause significant physiological impairment.

Ingestion: Not expected to be a health hazard via ingestion. This product can cause mild irritation of gastrointestinal tract if swallowed in small amounts. Large amounts may cause gastrointestinal disturbances. Symptoms may include irritation, nausea, vomiting, abdominal pain and diarrhea.

Skin Contact: Not expected to be irritating. Long term eye exposures may stain the eye and leave a rust ring.

Eye Contact: May cause irritation of eyes. Abrasive action of dust particulate may damage eye.

* 4. FIRST-AID MEASURES

• General Information:

Take off contaminated clothes immediately. Wash immediately with plenty of water. Continue rinsing for at least 10 minutes. If any symptom persists, seek medical attention.

- **Eye contact:** Rinse immediately with plenty of running water. Continue for at least 15 minutes. Seek medical advice.
- **Skin contact:** Wash immediately with plenty of water. Continue for at least 15 minutes. Obtain medical advice if there are persistent symptoms. Remove contaminated clothing.
- **Inhalation:** Remove patient to fresh air, allow to rest and keep warm. Obtain medical advice if there are persistent symptoms such as coughing or breathing difficulty.
- **Ingestion:** First rinse mouth with water. Immediately give 1-2 glasses of water, if victim is fully conscious. Seek medical attention.

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* 5. FIRE-FIGHTING MEASURES

- Not considered to be a fire hazard. The material is not combustible.
- **Extinguishing media:** Any means suitable for extinguishing surrounding fire.
- **Unsuitable extinguishing media:** None known
- **Exposure hazards:** None known
- **Combustion products:** None known
- **Protective equipment:** Firefighters and other exposed, wear self-contained breathing apparatus and protective suit.

* 6. ACCIDENTAL RELEASE MEASURES

- **Personal precautions:** Wear protective clothing.
- **Environmental precautions:** No special environmental precautions are required
- **Methods for cleaning up:** Vacuum or sweep up material and placed in a designated waste container.

* 7. HANDLING AND STORAGE

- **Handling:** Normal chemical handling. Wash hands after handling.
- **Storage:** Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Store in a cool, dry area. Keep container closed when not in use. Containers of this material may retain product residues (dust, solids); observe all warnings and precautions listed for the product.

* 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ventilation System: A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, Industrial Ventilation, A Manual of Recommended Practices, most recent edition, for details.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded, a half-face dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator.

WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using lavatory and at the end of the working program.

9. PHYSICAL AND CHEMICAL PROPERTIES

• General Information: Physical State: Appearance Odor:	solid auburn (coffee-brown with a red tint) granules odorless
• Change in condition: Melting point/Melting range: Decomposition temperature:	ca. 1460 °C 180 °C
• Flash point:	n/a
• Solubility in water 20 °C:	not soluble
• pH-value (10 g/l):	7 to 8
• Bulk weight (kg/m³):	ca. 640 kg/m ³

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* 10. STABILITY AND REACTIVITY

- **Stability:** Stable under ordinary conditions of use and storage.
- **Materials to avoid:** Strongly reducing agents, such as aluminum or magnesium powder may react in mixture with the products if initiated.
- **Conditions to Avoid:** At temperatures higher than 180 °C is transformed irreversible in iron oxide (Fe₂O₃).
- **Hazardous decomposition products:** If stored and handled properly – none known.

* 11. TOXICOLOGICAL INFORMATIONS

LD50 (acute, rat, oral):	> 5000 mg/kg
Eye irritation (rabbit).	Non-irritating
Skin irritation (rabbit)	Non-irritating

12. ECOLOGICAL INFORMATION

Eco-toxicity:

LC0 (acute and prolonged, Leuciscus Idus)	> 1000 mg/l
EC50 (acute, Daphnia Magna, 48h)	> 100 mg/l (OECD 202)
NOEC (Pseudomonas Putida)	> 1000 mg/l

Environmental Fate: Not biodegradable because it is an inorganic product, similar with natural ores. No known significant effects or critical hazards.

* 13. DISPOSAL CONSIDERATIONS

RCRA: This product as manufactured, is not a RCRA, listed hazardous waste and does not exhibit any characteristics of a hazardous waste, including toxicity

Disposal method: This product is generally suitable for landfill disposal. Follow all applicable Federal, State, and local laws, rules, and regulations regarding the proper disposal of this material. If this product has been altered or contaminated with other hazardous materials, appropriate waste analysis may be necessary to determine proper method for disposal. A qualified environmental professional should determine waste characterization, disposal, and treatment methods for this material in accordance with applicable Federal, State and local regulations and requirements. Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

* 14. TRANSPORT INFORMATIONS

• Land transport ADR/RID and GGVS/GGVE:

Not regulated for transport.

• Sea transport IMDG:

Not regulated for transport.

• Air transport IATA/ICAO:

Not regulated for transport.

FERROLOX® is not classified as a hazardous material by US DOT and is not regulated by the Transportation of Dangerous Goods (TDG) when shipped by any mode of transport.

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* 15. REGULATORY INFORMATIONS

Components listed in federal regulations:

Component	CAS No.	TSCA	RCRA	CERCLA	SARA 311/312	SARA 313	SARA 302
Ferric oxide*	1309-37-1	YES	No	No	Yes	No	No

Components listed in international regulations

Component	CAS No.	AICS	DSL	ECL	EINECS	ENCS	Philippines
Ferric oxide*	1309-37-1	Yes	Yes	Yes	Yes	Yes	Yes

Not listed or not regulated by the following inventories: CDTA, Chemical Weapon Convention

NFPA Ratings

Component	CAS No.	Health	Flammability	Reactivity	Others
Ferric oxide*	1309-37-1	1	0	0	-

* 16. OTHER INFORMATIONS

- This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product feature and shall not establish a legally valid contractual relationship.
- *** Data compared to the previous version altered.**
- **Reason for revision:** General update.

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